Amendments to the Specification:

Please replace the paragraph at Page 23, beginning at line 27 as shown below.

The step S203 may be skipped depending on the gradient of the edge detected in the step S202. In such a case, the operation from the step S201 is performed only when a certain angle condition is satisfied. Example of such an angle condition may be that the detected gradient is not in a substantially horizontal or vertical direction.

Please replace the paragraph at Page 27, beginning at line 7 as shown below.

For example, referring to Fig. 15, it is assumed that sixteen relative orientation detection filters 126 are provided for every 22.5 degrees and that the one corresponding to the angle A + c (45 degrees) yields the largest result (wherein "c" represents a sampling value). The relative orientation detection filters corresponding to the angle A (22.5 degrees) and the angle A + 2c (67.5 degrees) are assumed to yield the second and third largest results, respectively. The convolution results obtained with these filters are quadratic interpolated. The resulting median angle is identified as the direction of the edge and the angle of direction is determined as the angle (B).